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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,931	11/04/2003	Long-Song Cheng	MR1035-1328	3872
4586 7590 06/13/2007 ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			EXAMINER CHENG, PETER L	
			ART UNIT 2609	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/699,931

Applicant(s)

CHENG, LONG-SONG

Examiner

Peter L. Cheng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - There are some typographical and grammatical errors in the disclosure; for example, **page 5, line 22** (it is assumed that applicant intended to cite **and then calculating** instead of **and then calculation**), **page 6, lines 22 - 23** (enables the scanner to accurate scan), **page 6, line 23** (it only needs to slightly change), **page 6, line 24** (does not increase much cost);
 - **Page 5, lines 21 – 22**: for clarity, it is assumed that applicant intended to cite **setting Bm to be the maximum value of Qm(R), Qm(G), and Qm(B) and then ...** instead of **setting the maximum value of Qm(R), Qm(G) and Qm(B) to be Bm and then ...**;
 - **Page 6, line 1**: it is assumed that applicant intended to cite **$Um(B) = Qm(B) / Bm$** instead of **$Um(B) = Qm(G) / Bm$** ;

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities:
 - **Line 5:** it is assumed that applicant intended to cite **G indicates green color** instead of **R indicates green color**;
 - **Lines 13, 16, 17:** “**the document**” lacks antecedent basis;
3. Claim 2 is objected to because of the following informalities:
 - **Page 9, lines 2 – 3:** for clarity, it is assumed that applicant intended to cite **is to set Bm to be the maximum value of Qm(R), Qm(G), and Qm(B) and then ...** instead of **is to set the maximum value of Qm(R), Qm(G) and Qm(B) to be Bm and then ...**;
 - **Page 9, line 5:** it is assumed that applicant intended to cite **$Um(B) = Qm(B) / Bm$** instead of **$Um(B) = Qm(G) / Bm$** ;

Appropriate correction is required.

Allowable Subject Matter

Claims 1 – 6 would be allowed if the claim objections noted above were to be corrected. The following is a statement of reasons for the indication of allowable subject

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matter. Applicant's claims include elements which are not taught by the prior art nor rendered obvious. Examples of prior art are:

- **Tomita [US Patent Application 2002/002410 A1]** teaches the detection of fluorescent ink by comparing the output level of a line image sensor with the white level of a blank portion of the scanned document. If the line image sensor scans fluorescent ink, the corresponding output level will exceed the white level of a blank portion of the scanned document [“In step S52, the level of the readout image data is compared with the level “220”, as the white level of the sheet surface detected in step S3. If the level of the readout image data is higher than level “220”, a binary value “1” is assigned to the readout image data in step S53.”; **page 4, paragraph 62, lines 1 – 5.** “Since the readout image data is binarized based on the comparison result in step S52, an image of a character or the like formed using fluorescent ink expressed by a binary value of “1” can be detected”; **page 4, paragraph 63, lines 1 – 4.** “In step S4, the sheet surface white level detection circuit 331 of the image processing unit 33 is enabled to detect the level of image data on a blank portion where no information is recorded at the leading end of the form ...”; **page 4, paragraph 56, lines 1 - 4].**

However, Tomita does not teach claim 1 limitations of **reducing the brightness of the light source, and then scanning the standard white to**

obtain a second reference white $W2(R,G,B)$ or converting $Qm(R,G,B)$ into the accurate color output $Om(R,G,B)$ based on $W1(R,G,B)$ through a conversion method.

- Thierauf [US Patent Application 2003/0039359 A1] teaches the detection of fluorescent material imprinted on a bank note. Since scanning is performed under ambient light conditions, Thierauf teaches scanning of the bank note twice – once with the light source switched on, and again, with the light source switched off. However, Thierauf does not teach the use of a white reference nor does Thierauf teach the scaling process of **converting $Qm(R,G,B)$ into the accurate color output $Om(R,G,B)$** .
- There are numerous prior art references that teach scanning a white reference twice – once with the light source turned on, and again with the light source turned off. One such reference is **Akuzawa [US Patent 5,453,850]**. However, such references are not directed towards the scanning of fluorescent materials and therefore, also do not teach **converting $Qm(R,G,B)$ into the accurate color output $Om(R,G,B)$** .
- Still other prior art references teach the detection of fluorescent material by use of an additional infrared (IR) sensor. One such reference is **Nakai [US Patent 6,486,974 B1]**. However, since such references rely on this additional

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sensor, they do not teach the limitation of **determining that the document contains a fluorescent color if $Q_m(R) > W_2(R)$, $Q_m(G) > W_2(G)$, or $Q_m(B) > W_2(B)$.**

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter L. Cheng whose telephone number is 571-270-3007. The examiner can normally be reached on MONDAY - FRIDAY, 8:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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plc


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